THEREFORE, WE CLAIM:

5

10

15

20

25

- A method of treating or preventing demyelination in a subject, comprising the step of administering to a subject in need of such treatment an effective amount of at least one sterol absorption inhibitor or a pharmaceutically acceptable salt or solvate thereof.
- 2. The method according to claim 1, wherein the at least one sterol absorption inhibitor is represented by Formula (I):

$$Ar^{1}-X_{m}-(C)_{q}-Y_{n}-(C)_{r}-Z_{p}$$
 Ar^{3}
 Ar^{3}

(l)

or a pharmaceutically acceptable salt thereof or a solvate thereof, wherein:

Ar¹ and Ar² are independently selected from the group consisting of aryl and R⁴-substituted aryl;

Ar³ is aryl or R⁵-substituted aryl;

X, Y and Z are independently selected from the group consisting of -CH₂-, -CH(lower alkyl)- and -C(dilower alkyl)-;

R and R² are independently selected from the group consisting of -OR⁶, -O(CO)R⁶, -O(CO)OR⁹ and -O(CO)NR⁶R⁷;

R¹ and R³ are independently selected from the group consisting of hydrogen, lower alkyl and aryl;

q is 0 or 1;

r is 0 or 1;

m, n and p are independently selected from 0, 1, 2, 3 or 4; provided that at least one of q and r is 1, and the sum of m, n, p, q and r is 1, 2, 3, 4, 5 or 6; and provided that when p is 0 and r is 1, the sum of m, q and n is 1, 2, 3, 4 or 5;

 R^4 is 1-5 substituents independently selected from the group consisting of lower alkyl, $-OR^6$, $-O(CO)R^6$, $-O(CO)OR^9$, $-O(CH_2)_{1.5}OR^6$, $-O(CO)NR^6R^7$, $-NR^6R^7$, $-NR^6(CO)R^7$, $-NR^6(CO)R^9$, $-NR^6(CO)NR^7R^8$, $-NR^6SO_2R^9$, $-COOR^6$, $-CONR^6R^7$, $-COR^6$, $-SO_2NR^6R^7$, $S(O)_{0.2}R^9$, $-O(CH_2)_{1.10}$ - $-COOR^6$, $-O(CH_2)_{1.10}CONR^6R^7$, $-(lower alkylene)COOR^6$, $-CH=CH-COOR^6$, $-CF_3$, -CN, $-NO_2$ and halogen;

 R^5 is 1-5 substituents independently selected from the group consisting of $\mathsf{-OR}^6$, $\mathsf{-O(CO)R}^6$, $\mathsf{-O(CO)OR}^9$, $\mathsf{-O(CH_2)_{1-5}OR}^6$, $\mathsf{-O(CO)NR}^6R^7$, $\mathsf{-NR}^6R^7$, $\mathsf{-NR}^6(\mathsf{CO)R}^7$, $\mathsf{-NR}^6(\mathsf{CO)OR}^9$, $\mathsf{-NR}^6(\mathsf{CO)NR}^7R^8$, $\mathsf{-NR}^6\mathsf{SO_2R}^9$, $\mathsf{-COOR}^6$, $\mathsf{-CONR}^6R^7$, $\mathsf{-COR}^6$, $\mathsf{-SO_2NR}^6R^7$, $\mathsf{S(O)_{0-2}R}^9$, $\mathsf{-O(CH_2)_{1-10}}\mathsf{-COOR}^6$, $\mathsf{-O(CH_2)_{1-10}}\mathsf{CONR}^6R^7$, $\mathsf{-(lower alkylene)COOR}^6$ and $\mathsf{-CH=CH-COOR}^6$;

R⁶, R⁷ and R⁸ are independently selected from the group consisting of hydrogen, lower alkyl, aryl and aryl-substituted lower alkyl; and R⁹ is lower alkyl, aryl or aryl-substituted lower alkyl.

3. The method according to claim 1, wherein the at least one sterol absorption inhibitor is represented by Formula (III):

(III)

or a pharmaceutically acceptable salt thereof or a solvate thereof, wherein, in Formula (III) above:

25 Ar¹ is R³-substituted aryl; Ar² is R⁴-substituted aryl;

5

10

15

20

Ar³ is R⁵-substituted aryl;

Y and Z are independently selected from the group consisting of -CH₂-, -CH(lower alkyl)- and -C(dilower alkyl)-;

A is selected from -O-, -S-, -S(O)- or -S(O)₂-;

 R^{1} is selected from the group consisting of $-OR^{6}$, $-O(CO)R^{6}$, $-O(CO)OR^{9}$ and $-O(CO)NR^{6}R^{7}$; R^{2} is selected from the group consisting of hydrogen, lower alkyl and aryl; or R^{1} and R^{2} together are =O;

q is 1, 2 or 3;

p is 0, 1, 2, 3 or 4;

 R^5 is 1-3 substituents independently selected from the group consisting of $-OR^6$, $-O(CO)R^6$, $-O(CO)OR^9$, $-O(CH_2)_{1-5}OR^9$, $-O(CO)NR^6R^7$, $-NR^6R^7$, $-NR^6(CO)R^7$, $-NR^6(CO)OR^9$, $-NR^6(CO)NR^7R^8$, $-NR^6SO_2$ -lower alkyl, $-NR^6SO_2$ -aryl, $-CONR^6R^7$, $-COR^6$, $-SO_2NR^6R^7$, $S(O)_{0-2}$ -alkyl, $S(O)_{0-2}$ -aryl, $-O(CH_2)_{1-10}$ - $COOR^6$, $-O(CH_2)_{1-10}$ - $CONR^6R^7$, o-halogeno, m-halogeno, o-lower alkyl, m-lower alkyl, -(lower alkylene)- $COOR^6$, and $-CH=CH-COOR^6$:

R³ and R⁴ are independently 1-3 substituents independently selected from the group consisting of R⁵, hydrogen, p-lower alkyl, aryl, -NO₂, -CF₃ and p-halogeno;

R⁶, R⁷ and R⁸ are independently selected from the group consisting of hydrogen, lower alkyl, aryl and aryl-substituted lower alkyl; and R⁹ is lower alkyl, aryl or aryl-substituted lower alkyl.

4. The method according to claim 1, wherein the at least one sterol absorption inhibitor is represented by Formula (IV):

$$Ar^{1}-R^{1}-Q$$

$$Q$$

$$Q$$

$$Ar^{2}$$

5

10

15

20

or a pharmaceutically acceptable salt thereof or a solvate thereof, wherein, in Formula (IV) above:

A is selected from the group consisting of R²-substituted heterocycloalkyl, R²-substituted heterocycloalkyl, R²-substituted benzofused heterocycloalkyl, and R²-substituted benzofused heterocycloalkyl,

Ar¹ is aryl or R³-substituted aryl;

Ar² is aryl or R⁴-substituted aryl;

Q is a bond or, with the 3-position ring carbon of the azetidinone, forms the

5

10

15

20

25

R¹ is selected from the group consisting of:

 $-(CH_2)_q$ -, wherein q is 2-6, provided that when Q forms a spiro ring, q can also be zero or 1;

 $-(CH_2)_e-G-(CH_2)_r-, \ wherein\ G\ is\ -O-,\ -C(O)-,\ phenylene,\ -NR^8-\ or\ -S(O)_{0-2}-,\ e\ is\ 0-5\ and\ r\ is\ 0-5,\ provided\ that\ the\ sum\ of\ e\ and\ r\ is\ 1-6;$

-(C2-C6 alkenylene)-; and

 $-(CH_2)_f$ -V- $(CH_2)_g$ -, wherein V is C_3 - C_6 cycloalkylene, f is 1-5 and g is 0-5, provided that the sum of f and g is 1-6;

R⁵ is selected from:

 R^6 and R^7 are independently selected from the group consisting of $-CH_2$ -, $-CH(C_1-C_6 \text{ alkyl})$ -, $-C(\text{di-}(C_1-C_6) \text{ alkyl})$, -CH=CH- and $-C(C_1-C_6 \text{ alkyl})=CH$ -; or R^5 together with an adjacent R^6 , or R^5 together with an adjacent R^7 , form a -CH=CH- or a $-CH=C(C_1-C_6 \text{ alkyl})$ - group;

a and b are independently 0, 1, 2 or 3, provided both are not zero; provided that when R^6 is -CH=CH- or -C(C₁-C₆ alkyl)=CH-, a is 1; provided that when R^7 is

-CH=CH- or -C(C_1 - C_6 alkyl)=CH-, b is 1; provided that when a is 2 or 3, the R^6 's can be the same or different; and provided that when b is 2 or 3, the R^7 's can be the same or different;

and when Q is a bond, R¹ also can be selected from:

where M is -O-, -S-, -S(O)- or -S(O)₂-;

X, Y and Z are independently selected from the group consisting of $-CH_2$ -, $-CH(C_1-C_6)$ alkyl)- and $-C(di-(C_1-C_6))$ alkyl);

R¹⁰ and R¹² are independently selected from the group consisting of -OR¹⁴, -O(CO)R¹⁴, -O(CO)OR¹⁶ and -O(CO)NR¹⁴R¹⁵;

 R^{11} and R^{13} are independently selected from the group consisting of hydrogen, (C_1-C_6) alkyl and aryl; or R^{10} and R^{11} together are =0, or R^{12} and R^{13} together are =0;

d is 1, 2 or 3;

5

10

15

20

25

h is 0, 1, 2, 3 or 4;

s is 0 or 1; t is 0 or 1; m, n and p are independently 0-4; provided that at least one of s and t is 1, and the sum of m, n, p, s and t is 1-6; provided that when p is 0 and t is 1, the sum of m, s and n is 1-5; and provided that when p is 0 and s is 1, the sum of m, t and n is 1-5;

v is 0 or 1;

j and k are independently 1-5, provided that the sum of j, k and v is 1-5;

 \mbox{R}^2 is 1-3 substituents on the ring carbon atoms selected from the group consisting of hydrogen, (C₁-C₁₀)alkyl, (C₂-C₁₀)alkenyl, (C₂-C₁₀)alkynyl,

 (C_3-C_6) cycloalkyl, (C_3-C_6) cycloalkenyl, R^{17} -substituted aryl, R^{17} -substituted benzyl,

R¹⁷-substituted benzyloxy, R¹⁷-substituted aryloxy, halogeno, -NR¹⁴R¹⁵,

 $NR^{14}R^{15}(C_1-C_6 \text{ alkylene})$ -, $NR^{14}R^{15}C(O)(C_1-C_6 \text{ alkylene})$ -,- $NHC(O)R^{16}$,

OH, C_1 - C_6 alkoxy, -OC(O) R^{16} , -CO R^{14} , hydroxy(C_1 - C_6)alkyl, (C_1 - C_6)alkoxy(C_1 - C_6)alkyl, NO₂, -S(O)₀₋₂ R^{16} , -SO₂N R^{14} R^{15} and -(C_1 - C_6 alkylene)COO R^{14} ; when R^2 is a

substituent on a heterocycloalkyl ring, R^2 is as defined, or is =0 or $O^{(CH_2)_{1-2}}$; and, where R^2 is a substituent on a substitutable ring nitrogen, it is hydrogen, (C_1-C_6) alkyl, aryl, (C_1-C_6) alkoxy, aryloxy, (C_1-C_6) alkylcarbonyl, arylcarbonyl, hydroxy, $-(CH_2)_{1-6}CONR^{18}R^{18}$,

wherein J is -O-, -NH-, -NR 18 - or -CH $_2$ -;

5

10

15

20

25

 $R^{3} \text{ and } R^{4} \text{ are independently selected from the group consisting of 1-3} \\ \text{substituents independently selected from the group consisting of } (C_{1}-C_{6})\text{alkyl}, \\ -OR^{14}, -O(CO)R^{14}, -O(CO)OR^{16}, -O(CH_{2})_{1-5}OR^{14}, -O(CO)NR^{14}R^{15}, -NR^{14}R^{15}, \\ -NR^{14}(CO)R^{15}, -NR^{14}(CO)OR^{16}, -NR^{14}(CO)NR^{15}R^{19}, -NR^{14}SO_{2}R^{16}, -COOR^{14}, \\ -CONR^{14}R^{15}, -COR^{14}, -SO_{2}NR^{14}R^{15}, S(O)_{0-2}R^{16}, -O(CH_{2})_{1-10}-COOR^{14}, \\ -O(CH_{2})_{1-10}CONR^{14}R^{15}, -(C_{1}-C_{6} \text{ alkylene})-COOR^{14}, -CH=CH-COOR^{14}, -CF_{3}, -CN, -NO_{2} \text{ and halogen;} \\ \\$

 R^8 is hydrogen, (C_1-C_6) alkyl, aryl (C_1-C_6) alkyl, $-C(O)R^{14}$ or $-COOR^{14}$;

 R^9 and R^{17} are independently 1-3 groups independently selected from the group consisting of hydrogen, (C_1-C_6) alkyl, (C_1-C_6) alkoxy, -COOH, NO_2 , -NR 14 R 15 , OH and halogeno;

 R^{14} and R^{15} are independently selected from the group consisting of hydrogen, (C_1-C_6) alkyl, aryl and aryl-substituted (C_1-C_6) alkyl;

R¹⁶ is (C₁-C₆)alkyl, aryl or R¹⁷-substituted aryl;

 R^{18} is hydrogen or (C_1-C_6) alkyl; and

R¹⁹ is hydrogen, hydroxy or (C₁-C₆)alkoxy.

5. The method according to claim 1, wherein the at least one sterol absorption inhibitor is represented by Formula (V):

$$Ar^{1} \underset{R_{1}}{\underbrace{X_{m} \overset{R}{\underset{R_{1}}{|C|_{q}}} Y_{n} S(O)_{r}}} \underset{O}{\underbrace{Ar^{2}}}$$

(V)

or a pharmaceutically acceptable salt thereof or a solvate thereof, wherein, in Formula (V) above:

Ar¹ is aryl, R¹⁰-substituted aryl or heteroaryl;

Ar² is aryl or R⁴-substituted aryl;

Ar³ is aryl or R⁵-substituted aryl;

X and Y are independently selected from the group consisting of -CH₂-, -CH(lower alkyl)- and -C(dilower alkyl)-;

R is $-OR^6$, $-O(CO)R^6$, $-O(CO)OR^9$ or $-O(CO)NR^6R^7$; R¹ is hydrogen, lower alkyl or aryl; or R and R¹ together are =O;

q is 0 or 1;

10

15

20

25

r is 0, 1 or 2;

m and n are independently 0, 1, 2, 3, 4 or 5; provided that the sum of m, n and q is 1, 2, 3, 4 or 5;

 R^4 is 1-5 substituents independently selected from the group consisting of lower alkyl, $-OR^6$, $-O(CO)R^6$, $-O(CO)OR^9$, $-O(CH_2)_{1-5}OR^6$, $-O(CO)NR^6R^7$,

 $-NR^6R^7$, $-NR^6(CO)R^7$, $-NR^6(CO)OR^9$, $-NR^6(CO)NR^7R^8$, $-NR^6SO_2R^9$, $-COOR^6$,

 $-\mathsf{CONR}^{6}\mathsf{R}^{7},\,-\mathsf{COR}^{6},\,-\mathsf{SO}_{2}\mathsf{NR}^{6}\mathsf{R}^{7},\,\mathsf{S(O)}_{0\text{-}2}\mathsf{R}^{9},\,-\mathsf{O(CH}_{2})_{1\text{-}10}\text{-}\mathsf{COOR}^{6},$

 $-O(CH_2)_{1-10}CONR^6R^7$, -(lower alkylene)COOR 6 and -CH=CH-COOR 6 ;

 R^5 is 1-5 substituents independently selected from the group consisting of $-\mathsf{OR}^6$, $-\mathsf{O}(\mathsf{CO})\mathsf{R}^6$, $-\mathsf{O}(\mathsf{CO})\mathsf{OR}^9$, $-\mathsf{O}(\mathsf{CH}_2)_{1-5}\mathsf{OR}^6$, $-\mathsf{O}(\mathsf{CO})\mathsf{NR}^6\mathsf{R}^7$, $-\mathsf{NR}^6\mathsf{R}^7$, $-\mathsf{NR}^6(\mathsf{CO})\mathsf{R}^7$, $-\mathsf{NR}^6(\mathsf{CO})\mathsf{OR}^9$, $-\mathsf{NR}^6(\mathsf{CO})\mathsf{NR}^7\mathsf{R}^8$, $-\mathsf{NR}^6\mathsf{SO}_2\mathsf{R}^9$, $-\mathsf{COOR}^6$, $-\mathsf{CONR}^6\mathsf{R}^7$, $-\mathsf{COR}^6$, $-\mathsf{SO}_2\mathsf{NR}^6\mathsf{R}^7$, $\mathsf{S}(\mathsf{O})_{0-2}\mathsf{R}^9$, $-\mathsf{O}(\mathsf{CH}_2)_{1-10}\mathsf{-COOR}^6$, $-\mathsf{O}(\mathsf{CH}_2)_{1-10}\mathsf{CONR}^6\mathsf{R}^7$, $-\mathsf{CF}_3$, $-\mathsf{CN}$, $-\mathsf{NO}_2$, halogen,

-(lower alkylene)COOR⁶ and -CH=CH-COOR⁶;

5

10

20

 R^6 , R^7 and R^8 are independently selected from the group consisting of hydrogen, lower alkyl, aryl and aryl-substituted lower alkyl;

R⁹ is lower alkyl, aryl or aryl-substituted lower alkyl; and

 $R^{10} \text{ is 1-5 substituents independently selected from the group consisting of lower alkyl, } -OR^6, -O(CO)R^6, -O(CO)OR^9, -O(CH_2)_{1-5}OR^6, -O(CO)NR^6R^7, \\ -NR^6R^7, -NR^6(CO)R^7, -NR^6(CO)OR^9, -NR^6(CO)NR^7R^8, -NR^6SO_2R^9, -COOR^6, \\ -CONR^6R^7, -COR^6, -SO_2NR^6R^7, -S(O)_{0-2}R^9, -O(CH_2)_{1-10}\text{-COOR}^6, \\ -O(CH_2)_{1-10}CONR^6R^7, -CF_3, -CN, -NO_2 \text{ and halogen.}$

6. The method according to claim 1, where the at least one sterol absorption inhibitor is represented by Formula (VI):

$$R_4$$
 R_1
 R_2
 R_2
 R_3
 R_4
 R_2
 R_3

15 (VI)

or a pharmaceutically acceptable salt thereof or a solvate thereof, wherein:

-CH-, -C(lower alkyl)-, -CF-, -C(OH)-, -C(C₆H₅)-, -C(C₆H₄-R₁₅)-, -N- or -
$$^{+}$$
NO ;

R₁ is

R2 and R3 are independently selected from the group consisting of:
-CH2-, -CH(lower alkyl)-, -C(di-lower alkyl)-, -CH=CH- and -C(lower alkyl)=CH-; or
R1 together with an adjacent R2, or R1 together with an adjacent R3, form a
-CH=CH- or a -CH=C(lower alkyl)- group;

u and v are independently 0, 1, 2 or 3, provided both are not zero; provided that when R₂ is -CH=CH- or -C(lower alkyl)=CH-, v is 1; provided that when R₃ is -CH=CH- or -C(lower alkyl)=CH-, u is 1; provided that when v is 2 or 3, the R₂'s can be the same or different; and provided that when u is 2 or 3, the R₃'s can be the same or different;

R4 is selected from B-(CH₂) $_{m}$ C(O)-, wherein m is 0, 1, 2, 3, 4 or 5;

B-(CH₂)_q-, wherein q is 0, 1, 2, 3, 4, 5 or 6;

B-(CH₂)_e-Z-(CH₂)_r-, wherein Z is -O-, -C(O)-, phenylene, -N(R₈)- or -S(O)₀₋₂-, e is 0,

1, 2, 3, 4 or 5 and r is 0, 1, 2, 3, 4 or 5, provided that the sum of e and r is 0, 1, 2, 3, 4,

10 5 or 6;

5

15

20

25

30

B-(C2-C6 alkenylene)-;

B-(C4-C6 alkadienylene)-;

B-(CH₂)t-Z-(C₂-C₆ alkenylene)-, wherein Z is as defined above, and wherein t is 0, 1,

2 or 3, provided that the sum of t and the number of carbon atoms in the alkenylene chain is 2, 3, 4, 5 or 6;

B-(CH₂)_f-V-(CH₂)_g-, wherein V is C₃-C₆ cycloalkylene, f is 1, 2, 3, 4 or 5 and g is 0,

1, 2, 3, 4 or 5, provided that the sum of f and g is 1, 2, 3, 4, 5 or 6;

B-(CH₂)_t-V-(C₂-C₆ alkenylene)- or

B-(C₂-C₆ alkenylene)-V-(CH₂)_t-, wherein V and t are as defined above, provided that the sum of t and the number of carbon atoms in the alkenylene chain is 2, 3, 4, 5 or 6; B-(CH₂)_a-Z-(CH₂)_b-V-(CH₂)_d-, wherein Z and V are as defined above and a, b and d are independently 0, 1, 2, 3, 4, 5 or 6, provided that the sum of a, b and d is 0, 1, 2, 3, 4, 5 or 6; or T-(CH₂)_s-, wherein T is cycloalkyl of 3-6 carbon atoms and s is 0, 1, 2, 3, 4, 5 or 6; or

R₁ and R₄ together form the group B-CH=C-;

B is selected from indanyl, indenyl, naphthyl, tetrahydronaphthyl, heteroaryl or W-substituted heteroaryl, wherein heteroaryl is selected from the group consisting of pyrrolyl, pyridinyl, pyrimidinyl, pyrazinyl, triazinyl, imidazolyl, thiazolyl, pyrazolyl, thienyl, oxazolyl and furanyl, and for nitrogen-containing heteroaryls, the N-oxides thereof, or

W is 1 to 3 substituents independently selected from the group consisting of lower alkyl, hydroxy lower alkyl, lower alkoxy, alkoxyalkyl, alkoxyalkoxy, alkoxyalkoxy, alkoxycarbonylalkoxy, (lower alkoxyimino)-lower alkyl, lower alkanedioyl, lower alkyl lower alkanedioyl, allyloxy, -CF3, -OCF3, benzyl, R7-benzyl, benzyloxy, R7-benzyloxy, phenoxy, R7-phenoxy, dioxolanyl, NO2,-N(R8)(R9), N(R8)(R9)-lower alkylene-, N(R8)(R9)-lower alkylenyloxy-, OH, halogeno, -CN, -N3, -NHC(O)OR10, -NHC(O)R10, R11O2SNH-, (R11O2S)2N-, -S(O)2NH2, -S(O)0-2R8, tert-butyldimethyl-silyloxymethyl, -C(O)R12, -COOR19, -CON(R8)(R9), -CH=CHC(O)R12, -lower alkylene-C(O)R12, R10C(O)(lower alkylenyloxy)-, N(R8)(R9)C(O)(lower

5

10

15

20

25

alkylenyloxy)- and $^{-CH_2-N}$ for substitution on ring carbon atoms, and the substituents on the substituted heteroaryl ring nitrogen atoms, when present, are selected from the group consisting of lower alkyl, lower alkoxy, -C(O)OR₁₀, -C(O)R₁₀, OH, N(R₈)(R₉)-lower alkylene-,N(R₈)(R₉)-lower alkylenyloxy-, -S(O)₂NH₂ and 2-(trimethylsilyl)-ethoxymethyl;

R7 is 1-3 groups independently selected from the group consisting of lower alkyl, lower alkoxy, -COOH, NO₂, -N(R₈)(R₉), OH, and halogeno;

R8 and R9 are independently selected from H or lower alkyl;

R₁₀ is selected from lower alkyl, phenyl, R₇-phenyl, benzyl or R₇-benzyl;

R₁₁ is selected from OH, lower alkyl, phenyl, benzyl, R₇-phenyl or R₇-benzyl; R₁₂ is selected from H, OH, alkoxy, phenoxy, benzyloxy,

$$-N$$
 R_{13}
, -N(R8)(R9), lower alkyl, phenyl or R7-phenyl;

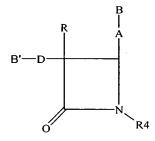
R₁₃ is selected from -O-, -CH₂-, -NH-, -N(lower alkyl)- or -NC(O)R₁₉;

R₁₅, R₁₆ and R₁₇ are independently selected from the group consisting of H and the groups defined for W; or R₁₅ is hydrogen and R₁₆ and R₁₇, together with adjacent carbon atoms to which they are attached, form a dioxolanyl ring;

R₁₉ is H, lower alkyl, phenyl or phenyl lower alkyl; and

R20 and R21 are independently selected from the group consisting of phenyl, W-substituted phenyl, naphthyl, W-substituted naphthyl, indanyl, indenyl, tetrahydronaphthyl, benzodioxolyl, heteroaryl, W-substituted heteroaryl, benzofused heteroaryl, W-substituted benzofused heteroaryl and cyclopropyl, wherein heteroaryl is as defined above.

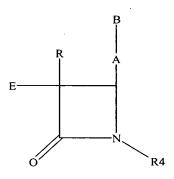
7. The method according to claim 1, wherein the at least one sterol absorption inhibitor is represented by Formula (VIIA) or (VIIB):



10

5

or.



(VIIB)

(VIIA)

or a pharmaceutically acceptable salt or solvate thereof, wherein:

$$R_1$$

20

B' is

$$- \underbrace{ \begin{bmatrix} R_{1'} \\ \ddots \\ R_{2'} \end{bmatrix}}_{R_{3'}}$$

D is -(CH₂)_mC(O)- or -(CH₂)_q- wherein m is 1, 2, 3 or 4 and q is 2, 3 or 4;

E is C₁₀ to C₂₀ alkyl or -C(O)-(C₉ to C₁₉)-alkyl, wherein the alkyl is straight or branched, saturated or containing one or more double bonds;

R is hydrogen, C₁-C₁₅ alkyl, straight or branched, saturated or containing one or more double bonds, or B-(CH₂)_r -, wherein r is 0, 1, 2, or 3;

R₁, R₂, R₃, R₁, R₂, and R₃ are independently selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, carboxy, NO₂, NH₂, OH, halogeno, lower alkylamino, dilower alkylamino, -NHC(O)OR₅, R₆O₂SNH- and -S(O)₂NH₂;

R₄ is

5

10

15

$$-\sqrt{\left(OR_5\right)_n}$$

wherein n is 0, 1, 2 or 3;

R5 is lower alkyl; and

R6 is OH, lower alkyl, phenyl, benzyl or substituted phenyl wherein the substituents are 1-3 groups independently selected from the group consisting of lower alkyl, lower alkoxy, carboxy, NO₂, NH₂, OH, halogeno, lower alkylamino and dilower alkylamino;

or a pharmaceutically acceptable salt thereof or a prodrug thereof.

20 8. The method according to claim 1, wherein the at least one sterol absorption inhibitor is represented by Formula (VIII):

$$Ar^{1}-R^{1}-Q$$
 R^{26}
 N
 Ar^{2}

or a pharmaceutically acceptable salt thereof or a solvate thereof, wherein, in Formula (VIII) above,

 R^{26} is H or OG^1 ;

G and G¹ are independently selected from the group consisting of

H,
$$OR^5$$
 OR^4 OR^5 OR^4 OR^5 OR^4 OR^7 OR^8 OR^8 OR^8 OR^8 OR^8

and
$$R^{4a}O$$
 CH_2R^b ; provided that when R^{26} is H or CH_2R^a

5 OH, G is not H;

10

15

R, R^a and R^b are independently selected from the group consisting of H, -OH, halogeno, -NH₂, azido, (C₁-C₆)alkoxy(C₁-C₆)-alkoxy or -W-R³⁰;

W is independently selected from the group consisting of -NH-C(O)-, -O-C(O)-, -O-C(O)-N(\mathbb{R}^{31})-, -NH-C(O)-N(\mathbb{R}^{31})- and -O-C(S)-N(\mathbb{R}^{31})-;

 R^2 and R^6 are independently selected from the group consisting of H, (C1-C6)alkyl, aryl and aryl(C1-C6)alkyl;

 R^3 , R^4 , R^5 , R^7 , R^{3a} and R^{4a} are independently selected from the group consisting of H, (C1-C6)alkyl, aryl(C1-C6)alkyl, -C(O)(C1-C6)alkyl and -C(O)aryl;

 R^{30} is selected from the group consisting of $\mathsf{R}^{32}\text{-substituted}$ T, $\mathsf{R}^{32}\text{-substituted-T-(C_1-C_6)alkyl},\ \mathsf{R}^{32}\text{-substituted-(C_2-C_4)alkenyl},$ $\mathsf{R}^{32}\text{-substituted-(C_1-C_6)alkyl},\ \mathsf{R}^{32}\text{-substituted-(C_3-C_7)cycloalkyl} \text{ and }$ $\mathsf{R}^{32}\text{-substituted-(C_3-C_7)cycloalkyl}(\mathsf{C_1-C_6)alkyl};$

R³¹ is selected from the group consisting of H and (C₁-C₄)alkyl;

T is selected from the group consisting of phenyl, furyl, thienyl, pyrrolyl, oxazolyl, isoxazolyl, thiazolyl, iosthiazolyl, benzothiazolyl, thiadiazolyl, pyrazolyl, imidazolyl and pyridyl;

R³² is independently selected from 1-3 substituents independently selected from the group consisting of halogeno, (C₁-C₄)alkyl, -OH, phenoxy, -CF₃, -NO₂, (C₁-C₄)alkoxy, methylenedioxy, oxo, (C₁-C₄)alkylsulfanyl, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, -N(CH₃)₂, -C(O)-NH(C₁-C₄)alkyl, -C(O)-N((C₁-C₄)alkyl)₂, -C(O)-(C₁-C₄)alkyl, -C(O)-(C₁-C₄)alkoxy and pyrrolidinylcarbonyl; or R³² is a covalent bond and R³¹, the nitrogen to which it is attached and R³² form a pyrrolidinyl, piperidinyl, N-methyl-piperazinyl, indolinyl or morpholinyl group, or a (C₁-C₄)alkoxycarbonyl-substituted pyrrolidinyl, piperidinyl, N-methylpiperazinyl, indolinyl or morpholinyl group;

Ar¹ is aryl or R¹⁰-substituted aryl;

Ar² is aryl or R¹¹-substituted aryl;

Q is a bond or, with the 3-position ring carbon of the azetidinone,

$$R^{12}$$
 $(R^{13})_a$ forms the spiro group $(R^{14})_b$; and

R¹ is selected from the group consisting of

-(CH₂)_q-, wherein q is 2-6, provided that when Q forms a spiro ring, q can also be zero or 1;

-(CH₂)_e-E-(CH₂)_r-, wherein E is -O-, -C(O)-, phenylene, -NR²²- or -S(O)₀₋₂-, e is 0-5 and r is 0-5, provided that the sum of e and r is 1-6;

-(C2-C6)alkenylene-; and

-(CH₂)_f-V-(CH₂)_g-, wherein V is C₃-C₆ cycloalkylene, f is 1-5 and g is 0-5, provided that the sum of f and g is 1-6;

R12 is

5

10

15

20

25

-CH-, -C(C₁-C₆ alkyl)-, -CF-, -C(OH)-, -C(C₆H₄-R²³)-, -N-, or
$$-^{+}$$
NO ;

 R^{13} and R^{14} are independently selected from the group consisting of -CH₂-,

-CH(C1-C6 alkyl)-, -C(di-(C1-C6) alkyl), -CH=CH- and

-C(C₁-C₆ alkyl)=CH-; or R^{12} together with an adjacent R^{13} , or R^{12} together with an adjacent R^{14} , form a -CH=CH- or a -CH=C(C₁-C₆ alkyl)- group;

a and b are independently 0, 1, 2 or 3, provided both are not zero; provided that when R^{13} is -CH=CH- or -C(C₁-C₆ alkyl)=CH-, a is 1; provided that when R^{14} is -CH=CH- or -C(C₁-C₆ alkyl)=CH-, b is 1; provided that when a is 2 or 3, the R^{13} 's can be the same or different; and provided that when b is 2 or 3, the R^{14} 's can be the same or different; and when Q is a bond, R^{1} also can be:

M is -O-, -S-, -S(O)- or $-S(O)_2$ -;

5

10

15

20

25

X, Y and Z are independently selected from the group consisting of -CH₂-, -CH(C₁-C₆)alkyl- and -C(di-(C₁-C₆)alkyl);

 R^{10} and R^{11} are independently selected from the group consisting of 1-3 substituents independently selected from the group consisting of (C₁-C₆)alkyl, -OR¹⁹, -O(CO)R¹⁹, -O(CO)OR²¹, -O(CH₂)₁₋₅OR¹⁹,

-O(CO)NR¹⁹R²⁰, -NR¹⁹R²⁰, -NR¹⁹(CO)R²⁰, -NR¹⁹(CO)OR²¹,

-NR¹⁹(CO)NR²⁰R²⁵, -NR¹⁹SO₂R²¹, -COOR¹⁹, -CONR¹⁹R²⁰, -COR¹⁹,

 $-SO_2NR^{19}R^{20}$, $S(O)_{0-2}R^{21}$, $-O(CH_2)_{1-10}-COOR^{19}$, $-O(CH_2)_{1-10}CONR^{19}R^{20}$,

-(C1-C6 alkylene)-COOR¹⁹, -CH=CH-COOR¹⁹, -CF₃, -CN, -NO₂ and halogen;

 $\rm R^{15}$ and $\rm R^{17}$ are independently selected from the group consisting of -OR^{19}, -O(CO)R^{19}, -O(CO)OR^{21} and -O(CO)NR^{19}R^{20};

 R^{16} and R^{18} are independently selected from the group consisting of H, (C1-C6)alkyl and aryl; or R^{15} and R^{16} together are =0, or R^{17} and R^{18} together are =0;

d is 1, 2 or 3;

h is 0, 1, 2, 3 or 4;

s is 0 or 1; t is 0 or 1; m, n and p are independently 0-4;

provided that at least one of s and t is 1, and the sum of m, n, p, s and t is 1-6; provided that when p is 0 and t is 1, the sum of m, s and n is 1-5; and provided that when p is 0 and s is 1, the sum of m, t and n is 1-5;

v is 0 or 1;

5

10

20

j and k are independently 1-5, provided that the sum of j, k and v is 1-5;

$$R_{j}^{15}$$
 - $X_{j}^{-}(C)_{v}^{-}Y_{k}^{-}S(O)_{0-2}^{-}$, Ar¹ can also be

and when Q is a bond and R¹ is R¹⁶, Ar¹ can also be pyridyl, isoxazolyl, furanyl, pyrrolyl, thienyl, imidazolyl, pyrazolyl, thiazolyl, pyrazinyl, pyrimidinyl or pyridazinyl;

 R^{19} and R^{20} are independently selected from the group consisting of H, (C1-C6)alkyl, aryl and aryl-substituted (C1-C6)alkyl;

R²¹ is (C₁-C₆)alkyl, aryl or R²⁴-substituted aryl;

 R^{22} is H, (C₁-C₆)alkyl, aryl (C₁-C₆)alkyl, -C(O) R^{19} or -COOR¹⁹;

15 R²³ and R²⁴ are independently 1-3 groups independently selected from the group consisting of H, (C1-C6)alkyl, (C1-C6)alkoxy, -COOH, NO₂,

-NR¹⁹R²⁰, -OH and halogeno; and

 R^{25} is H, -OH or (C₁-C₆)alkoxy.

9. The method according to claim 1, wherein the at least one sterol absorption inhibitor is represented by Formula (IX):

or a pharmaceutically acceptable salt or solvate thereof, wherein in Formula (IX):

R¹ is selected from the group consisting of H, G, G¹, G², -SO₃H and -PO₃H;

G is selected from the group consisting of: H,

$$R^5O$$
 OR^4 R^5O OR^4 OR^3 OR^5 OR^3 OR^4 OR^5 OR^3 OR^4 OR^3 OR^4 OR^3 OR^4 OR^5 OR^5 OR^4 OR^5 OR^5 OR^4 OR^5 OR^6 OR^6

wherein R, R^a and R^b are each independently selected from the group consisting of H, -OH, halo, -NH₂, azido, (C₁-C₆)alkoxy(C₁-C₆)alkoxy or -W-R³⁰;

W is independently selected from the group consisting of -NH-C(O)-, -O-C(O)-, -O-C(O)-N(R 31)-, -NH-C(O)-N(R 31)- and -O-C(S)-N(R 31)-;

 R^2 and R^6 are each independently selected from the group consisting of H, (C1-C6)alkyl, acetyl, aryl and aryl(C1-C6)alkyl;

 R^3 , R^4 , R^5 , R^7 , R^{3a} and R^{4a} are each independently selected from the group consisting of H, (C1-C6)alkyl, acetyl, aryl(C1-C6)alkyl, -C(O)(C1-C6)alkyl and -C(O)aryl;

10

15

5

 R^{30} is independently selected from the group consisting of $\mathsf{R}^{32}\text{-substituted T, R}^{32}\text{-substituted-T-(C_1-C_6)alkyl, R}^{32}\text{-substituted-(C_2-C_4)alkenyl,}$ $\mathsf{R}^{32}\text{-substituted-(C_1-C_6)alkyl, R}^{32}\text{-substituted-(C_3-C_7)cycloalkyl and R}^{32}\text{-substituted-(C_3-C_7)cycloalkyl(C_1-C_6)alkyl;}$

R³¹ is independently selected from the group consisting of H and (C₁-C₄)alkyl;

T is independently selected from the group consisting of phenyl, furyl, thienyl, pyrrolyl, oxazolyl, isoxazolyl, thiazolyl, isothiazolyl, benzothiazolyl, thiadiazolyl, pyrazolyl, imidazolyl and pyridyl;

 R^{32} is independently selected from 1-3 substituents which are each independently selected from the group consisting of H, halo, (C₁-C₄)alkyl, -OH, phenoxy, -CF₃, -NO₂, (C₁-C₄)alkoxy, methylenedioxy, oxo, (C₁-C₄)alkylsulfanyl, (C₁-C₄)alkylsulfinyl, (C₁-C₄)alkylsulfonyl, -N(CH₃)₂, -C(O)-NH(C₁-C₄)alkyl, -C(O)-N((C₁-C₄)alkyl)₂, -C(O)-(C₁-C₄)alkyl, -C(O)-(C₁-C₄)alkoxy and pyrrolidinylcarbonyl; or R^{32} is a covalent bond and R^{31} , the nitrogen to which it is attached and R^{32} form a pyrrolidinyl, piperidinyl, N-methyl-piperazinyl, indolinyl or morpholinyl group, or a (C₁-C₄)alkoxycarbonyl-substituted pyrrolidinyl, piperidinyl, N-methylpiperazinyl, indolinyl or morpholinyl group;

G¹ is represented by the structure:

5

10

15

20

HO
$$C = \frac{1}{2}$$
 $C = \frac{1}{2}$ $C = \frac{1}{2}$

wherein R^{33} is independently selected from the group consisting of unsubstituted alkyl, R^{34} -substituted alkyl, $(R^{35})(R^{36})$ alkyl-,

 R^{34} is one to three substituents, each R^{34} being independently selected from the group consisting of HOOC-, HO-, HS-, (CH₃)S-, H₂N-, (NH₂)(NH)C(NH)-, (NH₂)C(O)- and HOOCCH(NH₃⁺)CH₂SS-;

R³⁵ is independently selected from the group consisting of H and NH₂-;

R³⁶ is independently selected from the group consisting of H, unsubstituted alkyl, R³⁴-substituted alkyl, unsubstituted cycloalkyl and R³⁴-substituted cycloalkyl;

G² is represented by the structure:

wherein R^{37} and R^{38} are each independently selected from the group consisting of (C₁-C₆)alkyl and aryl;

 R^{26} is one to five substituents, each R^{26} being independently selected from the group consisting of:

a) H;

5

10

15

20

25

- b) -OH;
- c) -OCH₃;
 - d) fluorine;
 - e) chlorine;
 - f) –O-G;
 - g) -O-G¹;
 - h) -O-G²;
 - i) -SO₃H; and
 - j) $-PO_3H$;

provided that when R¹ is H, R²⁶ is not H, -OH, -OCH₃ or -O-G;

Ar¹ is aryl, R¹⁰-substituted aryl, heteroaryl or R¹⁰-substituted heteroaryl;

Ar² is aryl, R¹¹-substituted aryl, heteroaryl or R¹¹-substituted heteroaryl;

L is selected from the group consisting of:

- a) a covalent bond;
- b) $-(CH_2)_q$ -, wherein q is 1-6;
- c) -(CH₂)_e-E-(CH₂)_r-, wherein E is –O-, -C(O)-, phenylene, -NR²²- or –S(O)₀₋₂-, e is 0-5 and r is 0-5, provided that the sum of e and r is 1-6;
- d) –(C₂-C₆)alkenylene-;
- e) $-(CH_2)_f-V-(CH_2)_g-$, wherein V is C_3-C_6 cycloalkylene, f is 1-5 and g is 0-5, provided that the sum of f and g is 1-6; and

f)

5

10

15

20

25

$$--M-Y_{d}-C -Z_{h}-Z_{h}-X_{m}-C -Z_{h}-X_{m}-C -X_{m}-C -X_{m}-$$

wherein M is $-O_{-}$, $-S_{-}$, $-S(O)_{-}$ or $-S(O)_{2}^{-}$;

X, Y and Z are each independently selected from the group consisting of $-CH_2$ -, $-CH(C_1-C_6)$ alkyl- and $-C(di-(C_1-C_6)$ alkyl)-;

R⁸ is selected from the group consisting of H and alkyl;

 R^{10} and R^{11} are each independently selected from the group consisting of 1-3 substituents which are each independently selected from the group consisting of (C₁-C₆)alkyl, -OR¹⁹, -O(CO)R¹⁹, -O(CO)OR²¹, -O(CH₂)₁₋₅OR¹⁹, -O(CO)NR¹⁹R²⁰, -NR¹⁹(CO)R²⁰, -NR¹⁹(CO)OR²¹,

 $-NR^{19}(CO)NR^{20}R^{25}, -NR^{19}SO_2R^{21}, -COOR^{19}, -CONR^{19}R^{20}, -COR^{19}, -COOR^{19}, -COOR^{19}$

R¹⁵ and R¹⁷ are each independently selected from the group consisting of –OR¹⁹, -OC(O)R¹⁹, -OC(O)OR²¹, - OC(O)NR¹⁹R²⁰;

 R^{16} and R^{18} are each independently selected from the group consisting of H, $(C_1\text{-}C_6)$ alkyl and aryl;

or R¹⁵ and R¹⁶ together are =O, or R¹⁷ and R¹⁸ together are =O;

d is 1, 2 or 3;

5

10

15

20

h is 0, 1, 2, 3 or 4;

s is 0 or 1;

t is 0 or 1;

m, n and p are each independently selected from 0-4;

provided that at least one of s and t is 1, and the sum of m, n, p, s and t is 1-6; provided that when p is 0 and t is 1, the sum of m, n and p is 1-5; and provided that when p is 0 and s is 1, the sum of m, t and n is 1-5;

v is 0 or 1;

j and k are each independently 1-5, provided that the sum of j, k and v is 1-5;

Q is a bond, $-(CH_2)q^-$, wherein q is 1-6, or, with the 3-position ring carbon of the azetidinone, forms the spiro group

$$R^{12}$$
— $(R^{13})_a$
 $(R^{14})_b$ —;

wherein R¹² is

 R^{13} and R^{14} are each independently selected from the group consisting of -CH₂-, -CH(C₁-C₆ alkyl)-, -C(di-(C₁-C₆) alkyl), -CH=CH- and -C(C₁-C₆ alkyl)=CH-; or R^{12} together with an adjacent R^{13} , or R^{12} together with an adjacent R^{14} , form a -CH=CH- or a -CH=C(C₁-C₆ alkyl)- group;

a and b are each independently 0, 1, 2 or 3, provided both are not zero; provided that when R^{13} is -CH=CH- or -C(C₁-C₆ alkyl)=CH-, a is 1; provided that when R^{14} is -CH=CH- or -C(C₁-C₆ alkyl)=CH-, b is 1; provided that when a is 2 or 3, the R^{13} 's can be the same or different; and provided that when b is 2 or 3, the R^{14} 's can be the same or different;

and when Q is a bond and L is

10

15

20

25

$$X_j - X_j - Y_k - S(O)_{0-2} - X_j - S_16$$

then Ar¹ can also be pyridyl, isoxazolyl, furanyl, pyrrolyl, thienyl, imidazolyl, pyrazolyl, thiazolyl, pyrazinyl, pyrimidinyl or pyridazinyl;

 ${\sf R}^{19}$ and ${\sf R}^{20}$ are each independently selected from the group consisting of H, (C1-C6)alkyl, aryl and aryl-substituted (C1-C6)alkyl;

R²¹ is (C₁-C₆)alkyl, aryl or R²⁴-substituted aryl;

 R^{22} is H, (C1-C6)alkyl, aryl (C1-C6)alkyl, -C(O)R^{19} or -COOR^{19};

 R^{23} and R^{24} are each independently selected from the group consisting of 1-3 substituents which are each independently selected from the group consisting of H, (C1-C6)alkyl, (C1-C6)alkoxy, -COOH, NO₂, -NR¹⁹R²⁰, -OH and halo; and

R²⁵ is H, -OH or (C₁-C₆)alkoxy.

- 10. The method according to claim 1, wherein the at least one sterol absorption inhibitor is administered to a subject in an amount ranging from about 0.1 to about 1000 milligrams of sterol absorption inhibitor per day.
- 11. The method according to claim 1, further comprising the step of administering at least one antidemyelination agent to the subject.
- 12. The method according to claim 11, wherein the antidemyelination agent is selected from the group consisting of beta interferon, glatiramer acetate and corticosteroids.
 - 13. The method according to claim 1, further comprising the step of administering at least one HMG CoA reductase inhibitor to the subject.
 - 14. The method according to claim 13, wherein the at least one HMG CoA reductase inhibitor is atorvastatin.
- 15. The method according to claim 13, wherein the at least one HMG CoA reductase inhibitor is simvastatin.
 - 16. The method according to claim 1, wherein the subject has multiple sclerosis.
 - 17. A method of treating or preventing demyelination in a subject is provided, comprising the step of administering to a subject in need of such treatment

10

5

20

30

an effective amount of at least one sterol absorption inhibitor represented by Formula (II) below:

(II)

- or a pharmaceutically acceptable salt or solvate thereof.
 - 18. A method of treating or preventing multiple sclerosis in a subject, comprising the step of administering to a subject in need of such treatment an effective amount of at least one sterol absorption inhibitor or a pharmaceutically acceptable salt or solvate thereof.
 - 19. A composition comprising: (a) at least one sterol absorption inhibitor or a pharmaceutically acceptable salt or solvate thereof and (b) at least one antidemyelination agent.

15

20

10

20. A therapeutic combination comprising: (a) a first amount of at least one sterol absorption inhibitor or a pharmaceutically acceptable salt or solvate thereof; and (b) a second amount of at least one antidemyelination agent, wherein the first amount and the second amount together comprise a therapeutically effective amount for the treatment or prevention of demyelination in a subject.